REMARKS

Claims 12-39 are pending. Independent claim 26 is amended.

Rejections under 35 USC §103

Claims 12-14, 18, 26-28, 34 and 35 were rejected under 35 U.S.C. 103(a) as being unpatentable over Bonomi et al., U.S. Patent No. 6,769,127 B1 (hereinafter Bonomi), in view of Tsao, U.S. Pre-Grant Pub. No. 2003/0079016 A1 (hereinafter Tsao), Brooks et al., U.S. Patent No. 7,339,993 B1 (hereinafter Brooks), Reininger et al., U.S. 6,404,738 B1 (hereinafter Reininger), and Vitikainen et al., U.S. Pre- Grant Pub. 2003/0065802 (hereinafter Vitikainen), and Verosub, et al., U.S. Pub. No. 2004/0205028 (hereinafter Verosub).

Regarding claims 12 and 26: The action stated that:

> *Bonomi teaches a two part media system and method of operating such, that stores media contents and also delivers media content to an end device over a network at a data rate sufficient to enable real-time playback (citing [abstract], [col. 2, II. 30-36], [cols. 2-3, II. 52-4], [col. 12, II. 24-42]) and supports the delivery of media content and the quality of service (QOS) thereof (see [col. 7, II. 10-32]).*
>
> *Bonomi does not teach wherein the device is a network attached storage device (NAS).*
>
> *Tsao teaches using a NAS server to accomplish the storage and delivery of video streams to client devices (see [6], [7]).*

The action further stated that, while Bonomi does not teach storing programming in a proprietary and nonstandard digital format, that Brooks teaches using proprietary formats as a means to retrieve data (where the proprietary format is non-standard in that it is an "other format" and not a standard such as AVI, MPG, MOV, etc.) (see [col. 17, II. 23-35]). Thus, the action states that, at the time the invention was made, it would have been obvious to one of ordinary skill in the art to use proprietary format, as taught in Brooks, when receiving and storing media content, as taught in Bonomi, because proprietary formats which encompass non-standard formats, provide added security.

The action then notes that Verosub teaches a digital content store system which transfers content to a receiving device in a format which is coded such that it is only known to the "owner/sender" and cannot be played until authorized for decoding, whereby after receiving

authorization the data associated with the content is changed from a protected and proprietary format to one accessible by the end device (see [fig. 3], [44], [45], [72-80]). Therefore, the action concludes it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the transmitted file and sending device by precluding the file from being accessed without proper authorization and also providing authorization for the coded files as taught by Verosub in order to protect the rights of distributed content.

Further the action notes that Bonomi does not teach determining an end-to-end QoS which evaluates a hierarchy of content creation sources, transmission media and end device playback technology nor evaluating media type, a specified quality of service requirement to determining allocated bandwidth and transmission priority.

Reininger teaches a system which provides a dynamic allocation of bandwidth to control transmission quality priorities by using profiles and satisfaction indexes which evaluates a hierarchy (a highest satisfaction index) of content creation sources and transmission media to provide a desired of soft-QOS parameters (see [abstract], [col. 3, II. 40-62], [col. 4, II. 15-25], [cols. 4-5, II. 60-8], [col. 6, II. 46-56], [col. 7, II. 5-11]).

At the time the invention was made it would have been obvious to one of ordinary skill in the art to use a soft-OOS system to control the bandwidth and transmission priorities, as taught in Reininger, when providing a system designed to deliver content to clients with various receiving capabilities, as taught in Bonomi, because using this system provides a dynamic means to provide the best quality per user based on user requirements (see [abstract], [col. 10, II. 15-27]).

While Reininger does mention taking into consideration the performance requirements of a client the end device playback technology is not discussed. Vitikainen teaches providing a set of parameters associated with a receiving device so that the format of the video content which is transmitted is formatted to comply with (see [abstract], [20], [23]).

At the time the invention was made, it would have been obvious to one of ordinary skill in the art that such end device technology parameters, as taught in Vitikainen, could be combined as a factor of the hierarchical determinations made to provide a user defined OOS, as taught in Reininger, because the quality of the content transmitted to an end device is also a significant

factor in determining the necessary settings to provide a pre-established desired satisfaction index.

To summarize, the action generally assembles the following teachings from six different references for the rejection:

Bonomi - a two part media system that stores and delivers media contents at a data rate sufficient to enable real-time playback with desired quality of service (QoS);

Tsao - a NAS server stores and delivers video streams to client devices;

Brooks - proprietary formats used as a means to retrieve data (where the proprietary format is non-standard in that it is an "other format" and not a standard such as AVI, MPG, MOV, etc.)

Verosub - a digital content store system transfers content to a receiving device in a format which is coded such that it is only known to the "owner/sender" and cannot be played until authorized for decoding

Reininger - dynamic allocation of bandwidth to control transmission quality priorities by using profiles and satisfaction indexes which evaluates a hierarchy (a highest satisfaction index) of content creation sources and transmission media to provide desired of soft-QOS parameters; and

Vitikainen - a set of parameters associated with a receiving device so that the format of the video content which is transmitted is formatted to comply.

In response, the applicant notes that claim 1 requires:

> *a two-part digital recording and playback system further including:*
>
> *a first part for storing audiovisual programming in a proprietary and non-standard digital media format to preclude the digital media being played by known technology without authorization by the NAS; and*
>
> *a second part to enable real-time playback of audiovisual programming stored on the NAS, wherein the NAS employs Quality of Service (QoS) operations to prioritize communications; <emphasis added with underlining>*

As noted above, Bonomi is cited for teaching a two-part media system. The applicant notes, however, that Bonomi does not teach a two-part media system. Bonomi states:

> *the media delivery system can receive media programs in different 20 forms and be configured to redeliver the media programs to its subscribers in one or more predefined forms suitable to subscriber's needs (col. 5, lines 20-23);*

In reviewing the figures and text of Bonomi (see, for example FIG. 1A that shows a remote media source 102 that can deliver content over the Internet to server 106 that delivers the media to the user (e.g., user terminal 110)), the applicant does not find any indication of a two-part media system as claim 12 requires. FIG. 4A of the present application illustrates one embodiment of the two-part system. A first part comprises NAS 112 which encrypts content that is transmitted over a home network to a display device 116/120. FIG. 4B shows a first part (NAS 132) and a second part (PVR 134) that produces content to a display device 136. The applicant notes that content produced by NAS 112 or NAS 132 is not playable on a user device unless such content is first received and processed by the second part.

One reason the content produced by the first part is not playable on a display device is that the content is stored in a proprietary format that cannot be accessed by a user device. Thus the second part is required to change the content from the proprietary format to a format that the user device (display device) can process.

The official action, as noted above cites Brooks for teaching proprietary formats. The cited text from Brooks states:

> *In the present embodiment, the requesting device receives the packets of data and strips the RTP headers to recover the stream of data, step 710. The data stream is then typically 25 decompressed and then displayed on the requesting device, step 720. For example, the requesting device will retrieve MPEG-4 data, and then play that data to its display. As an example, the user may see that there is a traffic jam on the highway. In alternative embodiments, other types of formats may be used, for example, AVI, MPG, May, XING and the like. In still other embodiments, other formats, including other proprietary formats may also be specified and used by the requesting device.*

Very clearly, this text describes transmitting a stream of data in any format required by the receiving device including " *AVI, MPG, May, XING and ... other formats, including other proprietary formats may also be specified and used by the requesting device".*

Thus, Brooks is teaching the away from the requirements of the claim. The claims requires a proprietary format to prevent access by the end devices which Brooks teaches formatting to support access by the end devices. Thus, Brooks teaches the server transmitting the content in a format that the user device is operable to process. The claimed invention requires the content to be transmitted in a proprietary format that the user device cannot process. Thus, the second part of the two-part system is required to receive the content in the proprietary format and to convert the content to a format the user device can process.

Claim 12 further requires:

> *wherein the first part of the NAS system determines end-to-end quality of service for playback of the audiovisual programming stored on the NAS by evaluating a content creation source, a transmission media, end device playback technology and media type;*
>
> *wherein the first part of the NAS evaluates a hierarchy of content creation sources, a hierarchy of transmission media, and a hierarchy of end device*

playback technology along with specified quality of service requirements as a part of determining allocated bandwidth and transmission priority; and

wherein the second part of the NAS system stores received audiovisual programming for playback on a playback device.

As may be seen, the first and second parts of the NAS system thus determines (using a set of factors) quality of service parameters that are appropriate for transmissions from the first part to the second part of the NAS system.

The action refers to Bonomi for such teachings. An examination of Bonomi, however, shows that Bonomi teaches setting transmission rate and similar parameters for transmissions from the video server to an end user device over a Broadband Local Loop (see FIG. 1B) such as the Internet or even the PSTN though a faster broadband network is preferred. Bonomi certainly does not teach a two-part NAS system using QoS for transmissions between the two parts within a user premises or over a user network.

Claim 26, as presently constituted, now requires:

receiving, in a first part of a two-part NAS system, audiovisual content from a content source;

determining end-to-end quality of service for playback of the audiovisual programming stored on the first part of the NAS system by evaluating a content creation source, a transmission media, end device playback technology and media type;

evaluating a hierarchy of content creation sources, a hierarchy of transmission media, and a hierarchy of end device playback technology along with specified quality of service requirements as a part of determining allocated bandwidth and transmission priority;

changing data associated with the audiovisual programming from a protected and proprietary protocol to one that can be accessed by the end device; and

transmitting the audiovisual programming in a proprietary format to a second part of the two-part NAS system over a local area network at a data rate sufficient to enable real-time playback of audiovisual programming at an

expected quality level wherein the first and second parts of the two-part NAS system are both coupled to the local area network.

As presently constituted, claim 26 includes limitations similar to those discussed above in relation to claim 12. Corresponding arguments won't be repeated here.

The official action states Verosub teaches a digital content store system which transfers content to a receiving device in a format which is coded such that it is only known to the "owner/sender" and cannot be played until authorized for decoding, whereby after receiving authorization the data associated with the content is changed from a protected and proprietary format to one accessible by the end device. The applicant notes that Verosub teaches a content store 14 that delivers content to end user client terminals 16 in an encrypted format that is subject to digital rights management control. The DRM logic of Verosub includes, for example, merely limiting access based on license terms etc. While media is being accessed as allowed by the DRM logic, however, at the client terminal, there is no teaching for a two-part NAS system that uses a proprietary format for securely conducting the transmitted content within the user premises over the users local area network.

The action further states that while Reininger does mention taking into consideration the performance requirements of a client, the end device playback technology is not discussed. The action thus cites Vitikainen for teaching a set of parameters associated with a receiving device so that the format of the video content which is transmitted is formatted to comply with (see [abstract], [20], [23]). Thus, the action concludes that, at the time the invention was made, it would have been obvious to one of ordinary skill in the art that such end device technology parameters, as taught in Vitikainen, could be combined as a factor of the hierarchical determinations made to provide a user defined QoS, as taught in Reininger, because the quality of the content transmitted to an end device is also a significant factor in determining the necessary settings to provide a pre-established desired satisfaction index.

None of the references teach using the proprietary protocol for storing content to prevent unauthorized access to media and then modifying the protocol to one that the end device can process wherein the proprietary protocol is used for transmissions between first and second parts of a two-part NAS system using a user's local area network. Each of the cited references teaches other aspects. The applicant does not believe that the references teach this required claim

element. Accordingly, the applicant believes that the claimed invention of the independent claims 12 and 26 are novel and non-obvious over the cited art.

CONCLUSION

For the above reasons, the foregoing amendment places the Application in condition for allowance. Because the cited references do not teach all of the elements of the independent claims, it is believed that the grounds of rejection are overcome. Because the independent claims 12 and 26 are believed to be allowable, the applicant believes that the grounds for rejecting the corresponding dependent claims are moot.

Therefore, it is respectfully requested that the rejection of the claims be withdrawn and full allowance granted.

Should the Examiner have any further comments or suggestions, please contact James Harrison at (214) 902-8100.

Respectfully submitted,
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